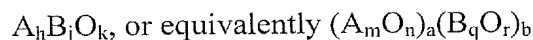


Amendments to the claims:

This listing of the claims will replace all prior versions and listings of the claims in the application:

Listing of the Claims:

1. (Currently Amended) A semiconductor device comprising:
a semiconductor substrate;
a first oxide layer on the semiconductor substrate, the first oxide layer comprising an element from the semiconductor substrate;
a second oxide layer on the first oxide layer opposite the semiconductor substrate, the second oxide layer comprising a stoichiometric, single-phase complex oxide represented by the formula:



in which the elemental oxide components, (A_mO_n) and (B_qO_r) are combined so that $h = j$ or, equivalently, $ma = bq$, and a, b, h, j, k, m, n, q and r are non-zero integers; and wherein:

A is an element of the lanthanide rare earth elements of the periodic table or the trivalent elements from cerium to lutetium; and

B is an element of the transition metal elements of groups **[[IIIB,]]** IVB or VB of the periodic table.

2. (Original) A device according to Claim 1 wherein the second oxide layer has a thickness of less than 15 nm.
3. (Original) A device according to Claim 1 wherein the second oxide layer has a band gap of greater than about 5.5 eV.
4. (Original) A device according to Claim 1 wherein the second oxide layer has a

conduction band offset energy of greater than 1.5 eV.

5. (Original) A device according to Claim 1 wherein the second oxide layer has an equivalent oxide thickness (EOT) of about 0.5 to about 1.6 nm.

6. (Original) A device according to Claim 1 wherein B is an element with 3d, 4d or 5d electrons available for bonding to oxygen, and wherein A is an element in which one 5d electron is available for bonding.

7. (Currently Amended) A device according to Claim 1, wherein B is ~~scandium~~, titanium, tantalum or niobium.

8. (Currently Amended) A device according to Claim 1, wherein B is ~~scandium~~, titanium, tantalum, or niobium (Nb) and wherein A is trivalent gadolinium, praseodymium or lutetium.

9. (Currently Amended) A device according to Claim 1, wherein B is ~~scandium~~, titanium, tantalum or niobium and wherein A is cerium, neodymium, promethium, samarium, europium, terbium, dysprosium, holmium, erbium, thulium, or ytterbium.

10. (Original) A device according to Claim 1, wherein the substrate comprises a material selected from the group consisting of a Group III-V binary alloy, a Group III-V quaternary alloy, a Group III-nitride alloy, and combinations thereof.

11. (Original) A device according to Claim 1, wherein the substrate comprises a Group III-V binary alloy selected from the group consisting of (Ga,Al)As, (In,Ga)As, and combinations thereof.

12. (Original) A device according to Claim 1, wherein the substrate comprises a Group III-V quaternary alloy comprising (Ga,In)(As,P).

13. (Original) A device according to Claim 1, wherein the substrate comprises a Group III-nitride alloy selected from the group consisting of (Ga,Al)N, (Ga,In)N, (Al,In)N, (Ga,Al,In)N, and combinations thereof.

14. (Original) A device according to Claim 1, wherein the substrate comprises a material selected from the group consisting of silicon (Si), germanium (Ge), silicon carbide (SiC), gallium nitride (GaN), gallium arsenide (GaAs), and combinations thereof.

15. (Original) A device according to Claim 1, wherein the substrate is a semiconductor-on-insulator (SOI) substrate.

16. (Original) A device according to Claim 1, wherein the first oxide layer comprises a nitrided silicon dioxide.

17. (Original) A device according to Claim 16, wherein the first oxide layer contributes less than about 0.5 nm of oxide-equivalent capacitance to said field effect transistor.

18. (Original) A device according to Claim 1, wherein the device comprises a field effect transistor.

19. (Original) A device according to Claim 1, wherein the device comprises a photovoltaic device.

20. (Original) A device according to Claim 1, wherein the device comprises a high electron mobility transistor.

In re: Gerald Lucovsky et al.
Serial No.: 10/560,488
Page 5 of 8

21.-32. (Canceled).

33. (Previously Presented) A device according to Claim 1, wherein the second oxide layer is non-crystalline.